

CLAIMS

What is claimed is:

1. A method for reducing the boot time for a computer, comprising the steps for:
 - (a) supplying power to the computer;
 - (b) disabling a plurality of input/output (I/O) devices coupled to the computer;
 - (c) performing a boot process for the computer; and
 - (d) placing the computer in a suspend to memory state, wherein the steps (a) through (d) are performed before a user turns on the computer.

2. The method of claim 1, wherein the supplying step (a) comprises:
 - (a1) supplying power to the computer when the computer is in a powered down state.

3. The method of claim 2, wherein the supplying step (a1) comprises:
 - (a1i) supplying power to the computer by plugging the computer into an AC outlet.

4. The method of claim 1, wherein the performing step (c) comprises:
 - (c1) performing the boot process for the computer by a basic input/output system (BIOS) of the computer; and
 - (c2) setting a flag by the BIOS, wherein setting the flag indicated that the computer is being booted from a powered down state.

1 5. The method of claim 4, wherein the flag comprises at least one chip set register.

1 6. The method of claim 1, wherein the placing step (d) comprises:

2 (d1) checking a flag by an operating system (OS) of the computer, wherein the flag
3 indicates whether or not the computer is being booted from a powered down
4 state; and

5 (d2) placing the computer in the suspend to memory state if the flag indicates that the
6 computer is being booted from the powered down state.

1 7. The method of claim 1, wherein the suspend to memory state is an S3 state.

1 8. The method of claim 1, further comprising:

2 (e) supplying power to the computer when the computer is in the suspend to memory
3 state;

4 (f) resuming operation of an OS of the computer;

5 (g) checking a flag by the OS, wherein the flag indicates whether or not the computer
6 is being booted from a powered down state;

7 (h) enabling the plurality of I/O devices if the flag indicates that the computer is not
8 being booted from the powered down state; and

9 (i) operating the computer in a wake state.

1 9. The method of claim 8, further comprising:

2 (j) returning the computer to the suspend to memory state if the computer is being
3 turned "off".

1 10. The method of claim 9, wherein the returning step (j) comprises:

2 (j1) returning the computer to the suspend to memory state if a power button of the
3 computer is pressed.

1 11. A method for reducing the boot time for a computer, comprising the steps for:

2 (a) supplying power to the computer;

3 (b) determining if the power is supplied to the computer when the computer is in a
4 powered down state or a suspend to memory state;

5 (c) booting the computer when the power is supplied to the computer when the
6 computer is in a powered down state, wherein the booting step (c) comprises:

7 (c1) disabling a plurality of I/O devices coupled to the computer,

8 (c2) performing a boot process for the computer, and

9 (c3) placing the computer in the suspend to memory state; and

10 (d) operating the computer in a wake state if the power is supplied to the computer
11 when the computer is in the suspend to memory state.

1 12. The method of claim 11, wherein the disabling step (c1) and the performing step
2 (c2) are performed by a BIOS of the computer, wherein the performing step (c2)
3 further comprises:
4 (c2i) setting a flag by the BIOS, wherein the flag indicates whether or not the computer
5 is being booted from the powered down state.

1 13. The method of claim 11, wherein the placing step (c3) is performed by an OS of
2 the computer, wherein the placing step (c3) comprises:
3 (c3i) checking a flag by the OS, wherein the flag indicates whether or not the computer
4 is being booted from the powered down state; and
5 (c3ii) placing the computer in the suspend to memory state if the flag indicates that the
6 computer is being booted from the powered down state.

1 14. The method of claim 12, wherein the flag comprises at least one chip set register.

1 15. The method of claim 11, wherein the operating step (d) comprises:
2 (d1) resuming operation of an OS of the computer;
3 (d2) checking a flag by the OS, wherein the flag indicates whether or not the computer
4 is being booted from a powered down state;
5 (d3) enabling the plurality of I/O devices if the flag indicates that the computer is not

6 being booted from the powered down state; and

7 (d4) operating the computer in the wake state.

1 16. The method of claim 11, further comprising:

2 (e) returning the computer to the suspend to memory state if a power button of the
3 computer is pressed.

1 17. A computer readable medium with program instructions for reducing the boot
2 time for a computer, comprising the instructions for:

- 3 (a) supplying power to the computer;
4 (b) disabling a plurality of I/O devices coupled to the computer;
5 (c) performing a boot process for the computer; and
6 (d) placing the computer in a suspend to memory state, wherein the instructions (a)
7 through (d) are performed before a user turns on the computer.

1 18. The medium of claim 17, wherein the supplying instruction (a) comprises
2 instructions for:

3 (a1) supplying power to the computer when the computer is in a powered down state.

1 19. The medium of claim 18, wherein the supplying instruction (a1) comprises
2 instructions for:
3 (a1i) supplying power to the computer by plugging the computer into an AC outlet.

1 20. The medium of claim 17, wherein the performing instruction (c) comprises
2 instructions for:
3 (c1) performing the boot process for the computer by a basic input/output system
4 (BIOS) of the computer; and
5 (c2) setting a flag by the BIOS, wherein setting the flag indicated that the computer is
6 being booted from a powered down state.

1 21. The medium of claim 20, wherein the flag comprises at least one chip set register.

1 22. The medium of claim 17, wherein the placing instruction (d) comprises
2 instructions for:
3 (d1) checking a flag by an operating system (OS) of the computer, wherein the flag
4 indicates whether or not the computer is being booted from a powered down state; and
5 (d2) placing the computer in the suspend to memory state if the flag indicates that the
6 computer is being booted from the powered down state.

1 23. The medium of claim 17, wherein the suspend to memory state is an S3 state.

1 24. The medium of claim 17, further comprising instructions for:

2 (e) supplying power to the computer when the computer is in the suspend to memory
3 state;

4 (f) resuming operation of an OS of the computer;

5 (g) checking a flag by the OS, wherein the flag indicates whether or not the computer
6 is being booted from a powered down state;

7 (h) enabling the plurality of I/O devices if the flag indicates that the computer is not
8 being booted from the powered down state; and

9 (i) operating the computer in a wake state.

1 25. The medium of claim 24, further comprising instructions for:

2 (j) returning the computer to the suspend to memory state if the computer is being
3 turned "off".

1 26. The medium of claim 25, wherein the returning instruction (j) comprises
2 instructions for:

3 (j1) returning the computer to the suspend to memory state if a power button of the
4 computer is pressed.

6 being booted from the powered down state; and

7 (d4) operating the computer in the wake state.

1 16. The method of claim 11, further comprising:

2 (e) returning the computer to the suspend to memory state if a power button of the
3 computer is pressed.

1 17. A computer readable medium with program instructions for reducing the boot
2 time for a computer, comprising the instructions for:

- 3 (a) supplying power to the computer;
4 (b) disabling a plurality of I/O devices coupled to the computer;
5 (c) performing a boot process for the computer; and
6 (d) placing the computer in a suspend to memory state, wherein the instructions (a)
7 through (d) are performed before a user turns on the computer.

1 18. The medium of claim 17, wherein the supplying instruction (a) comprises
2 instructions for:

3 (a1) supplying power to the computer when the computer is in a powered down state.

1 19. The medium of claim 18, wherein the supplying instruction (a1) comprises
2 instructions for:
3 (a1i) supplying power to the computer by plugging the computer into an AC outlet.

1 20. The medium of claim 17, wherein the performing instruction (c) comprises
2 instructions for:
3 (c1) performing the boot process for the computer by a basic input/output system
4 (BIOS) of the computer; and
5 (c2) setting a flag by the BIOS, wherein setting the flag indicated that the computer is
6 being booted from a powered down state.

1 21. The medium of claim 20, wherein the flag comprises at least one chip set register.

1 22. The medium of claim 17, wherein the placing instruction (d) comprises
2 instructions for:
3 (d1) checking a flag by an operating system (OS) of the computer, wherein the flag
4 indicates whether or not the computer is being booted from a powered down state; and
5 (d2) placing the computer in the suspend to memory state if the flag indicates that the
6 computer is being booted from the powered down state.

1 23. The medium of claim 17, wherein the suspend to memory state is an S3 state.

1 24. The medium of claim 17, further comprising instructions for:

2 (e) supplying power to the computer when the computer is in the suspend to memory
3 state;

4 (f) resuming operation of an OS of the computer;

5 (g) checking a flag by the OS, wherein the flag indicates whether or not the computer
6 is being booted from a powered down state;

7 (h) enabling the plurality of I/O devices if the flag indicates that the computer is not
8 being booted from the powered down state; and

9 (i) operating the computer in a wake state.

1 25. The medium of claim 24, further comprising instructions for:

2 (j) returning the computer to the suspend to memory state if the computer is being
3 turned "off".

1 26. The medium of claim 25, wherein the returning instruction (j) comprises
2 instructions for:

3 (j1) returning the computer to the suspend to memory state if a power button of the
4 computer is pressed.

1 27. A computer readable medium with program instructions for reducing the boot
2 time for a computer, comprising the instructions for:

3 (a) supplying power to the computer;

4 (b) determining if the power is supplied to the computer when the computer is in a
5 powered down state or a suspend to memory state;

6 (c) booting the computer when the power is supplied to the computer when the
7 computer is in a powered down state, wherein the booting instruction (c) comprises
8 instructions for:

9 (c1) disabling a plurality of I/O devices coupled to the computer,

10 (c2) performing a boot process for the computer, and

11 (c3) placing the computer in the suspend to memory state; and

12 (d) operating the computer in a wake state if the power is supplied to the computer
13 when the computer is in the suspend to memory state.

1 28. The medium of claim 27, wherein the disabling instruction (c1) and the
2 performing instruction (c2) are performed by a BIOS of the computer, wherein the
3 performing instruction (c2) further comprises instructions for:

4 (c2i) setting a flag by the BIOS, wherein the flag indicates whether or not the computer
5 is being booted from the powered down state.

1 29. The medium of claim 27, wherein the placing instruction (c3) is performed by an
2 OS of the computer, wherein the placing instruction (c3) comprises instructions for:
3 (c3i) checking a flag by the OS, wherein the flag indicates whether or not the computer
4 is being booted from the powered down state; and
5 (c3ii) placing the computer in the suspend to memory state if the flag indicates that the
6 computer is being booted from the powered down state.

1 30. The medium of claim 28, wherein the flag comprises at least one chip set register.

1 31. The medium of claim 27, wherein the operating instruction (d) comprises
2 instructions for:
3 (d1) resuming operation of an OS of the computer;
4 (d2) checking a flag by the OS, wherein the flag indicates whether or not the computer
5 is being booted from a powered down state;
6 (d3) enabling the plurality of I/O devices if the flag indicates that the computer is not
7 being booted form the powered down state; and
8 (d4) operating the computer in the wake state.

1 32. The medium of claim 27, further comprising instructions for:

2 (e) returning the computer to the suspend to memory state if a power button of the
3 computer is pressed.

1 33. A system, comprising:

2 a plurality of I/O devices; and

3 a computer coupled to the plurality of I/O devices, the computer comprising:

4 a BIOS,

5 a memory, and

6 an OS, wherein when power is supplied to the computer before a user turns on the
7 computer, the BIOS disables the plurality of I/O devices and performs a boot process for
8 the computer, and the OS places the computer in a suspend to memory state.

1 34. The system of claim 33, wherein the computer further comprises a register,

2 wherein a state of the register indicates whether or not the computer is being supplied

3 power with the computer being in a powered down state or the suspend to memory state.

1 35. The system of claim 34, wherein if the register indicates that the computer is

2 being supplied power with the computer being in a powered down state, then the OS

3 places the computer in the suspend to memory state.

36. The system of claim 34, wherein if the register indicates that the computer is being supplied power with the computer being in the suspend to memory state, then the OS operates the computer in a wake state.